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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2663C
Plant ID No.:	079-00006
Applicant:	Appalachian Power Company
Facility Name:	John E. Amos Plant
Location:	St. Albans
SIC Code:	4911
Application Type:	Modification
Received Date:	April 7, 2010
Engineer Assigned:	Edward S. Andrews, P.E.
Fee Amount:	$1000.00
Date Received:	April 7, 2010
Completeness Date:	May 19, 2010
Due Date:	August 17, 2010
Newspaper:	*The Daily Mail* and *Charleston Gazette*
Applicant Ad Date:	April 19, 2010
UTMs:	Easting: 428.2 km Northing: 4,258.4 km Zone: 17
Description:	The modification is for the construction of a haul road from Units 1, 2, and 3 to the FGD Landfill.

DESCRIPTION OF PROCESS

Appalachian Power owns and operates the John E. Amos Power Plant, which is located on the Kanawha River near St. Albans, WV. The facility consists of three coal fired steam generators that are capable of generating 2,900 MW of electricity.

As part of the flue gas desulfurization (FGD) project at the facility, a FGD landfill was created to disposal of the waste from the wet scrubbers. This landfill is located across State Route 817 (formerly U.S. Route 35) up just Bill Creek Road (County Route 44).

Appalachian Power has elected to dispose of the ash (bottom and fly ash) from the three units at the FGD Landfill. Currently, the fly ash from units 1 and 2 is transport to the Quarrier Landfill, which is located further down the State Route 817. Once the Quarrier Landfill has reached its full capacity, the fly ash from units 1 and 2 will be hauled to the FGD Landfill as well.

Currently, the wet bottom ash from all three is send to one of the two bottom ash ponds. Only one ponds is being filled at any given time (is in operation). Once filled, the pond is drain and the ash is removed. This ash is sent be transported to a landfill. As result of this proposal, the bottom ash processing will remain the same except that the ash will be haul to the FGD landfill.

The ash will be transport utilizing a paved dedicated haul road including a bridge over State Route 817 to the landfill. Only one tenth of a mile for the fly ash route will be unpaved. The fly ash being hauled will be conditioned to a moisture content of no least then 15% in order to minimize fugitive dust during the loading onto trucks. This ash conditioning system is the current system in place and is in operation for all three units.

SITE INSPECTION

This permitting action does not involve the installation of new equipment or modification of existing emission units. In addition, the facility is routinely visited by members of the Compliance and Enforcement Section part of agency's role of determining the facility's compliance status with the applicable State rules and Federal regulations. Thus, this permitting does not required a visit to the facility.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this project are fugitive particulate matter which PM_{10} and $PM_{2.5.}$ Appalachian Power estimated that 2.2 million tons of ash would be transported on this roadway annually. This transporting activity could generate up to 4.5 tons of PM_{10} and 0.7 tons of $PM_{2.5}$ annually with controls.

These emission estimates were formulated using equations published in Chapters 13.2.1.(paved roadways) and 13.2.2. (unpaved roadways) of AP-42. Appalachian Power has proposed to use apply water to the paved and unpaved surfaces to reduce or remove the silt. In addition to applying water, a mechanical sweeping will be used remove addition silt from the paved roadway if needed. For the unpaved portion, chemical suppressants will be applied as least twice a year. These measures were assumed to have estimated removal efficiency of 94% for PM, PM_{10}, and $PM_{2.5}$.

REGULATORY APPLICABILITY

The facility is a by definition under 45CSR14 a major source and a listed source category that fugitive emissions must be counted towards applicability with regards to this rule. Appalachian Power estimated that the annual PM and PM_{10} emissions after controls to be 22.4 tons per year and 4.5 tons per year respectively. Because this estimated annual emissions of PM and PM_{10} did not exceed the major source trigger levels for these respective pollutants. No further analysis is requirement by rule to determine if this project does not constitutes a major modification.

This permitting action does not affect the facility or any emission unit at the facility applicability status with any state rule or federal regulation. Only applicable rule is 45CSR§2-5.1. This rule requires applicable sources to implement measures that minimize, reduce, or eliminate fugitive particulate matter sources associated with fuel burning units.

Appalachian Power has proposed to use the existing measures currently permitted under Permit R13-2663B to control fugitive particulate matter as result of disposing of the ash. These measures were noted in the "ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER" section of this evaluation. §2-5.1. merely states the sources must install and operate system than minimizes fugitive particulate matter. These controls appear to satisfy this control requirement.

The applicant provide a complete application, published a Class I legal ad as required under 45CSR§13-8.3. and paid the application filing fee as required under 45CSR§22-3.4.a.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

No non-criteria regulated pollutants are expected to be emitted from this project.

AIR QUALITY IMPACTS ANALYSIS

This writer deemed that an air dispersion modeling study or analysis was not necessary, because the proposed modification does not meet the definition as a major modification as defined in 45CSR14.

MONITORING OF OPERATIONS

Permit R13-2663B requires the applicant to conduct weekly checks of inspect all fly ash fugitive dust control systems at the facility. This inspection program includes paved and unpaved roadways and associated controls at the facility. Thus, no further monitoring is deemed necessary.

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore, it is the recommendation of the writer that permit R13-2663C for the modification of the roadways to be used to transport the bottom and fly ash from the units to the landfill be granted to Appalachian Power Company.

Edward S. Andrews, P.E.
Engineer

Date: May 26, 2010
Revised: June 8, 2010